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**TITLE:** Assessment and Intervention for the Reduction of Adverse  
Gynecologic and Obstetric Clinical Events in Naval Personnel  
Aboard Ship

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8-22-95  
Date

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## Introduction

Reproductive health behaviors among young women have changed markedly since the 1960s. The most important change has been a lowering of the age of sexual debut. Today, 74% of young women have become sexually active by the age of 19 years.<sup>1</sup> In addition, while 91% of young women have used some form of contraception by age 19,<sup>2</sup> only 19% of women 15-44 years of age used a condom at last intercourse. This combination of early sexual debut and poor use of a barrier method results in two potential negative reproductive health outcomes for adolescent and young adult women: unintended pregnancies (UPs) and acquisition of sexually transmitted diseases (STDs). Thus, strategies to prevent negative reproductive health outcomes should address both UPs and STDs.

In the military the high rate of morbidity and the financial costs of UPs and STDs are amplified, particularly for women assigned to ships. Although pregnancy no longer results in discharge from the service, a pregnant service member can not remain attached to a ship after the 20th week of gestation. Further, if a pregnancy is diagnosed on a prolonged deployment such as a Western Pacific deployment, the individual must be evacuated to continental United States (CONUS), without replacement. Thus, UP in women assigned to ships results in personnel loss, reassignments, and costly evacuations. The sequelae of UPs and STDs, such as pelvic inflammatory disease (PID) and ectopic pregnancy, also result in greater potential morbidity for women assigned to ships. The diagnostic modalities and treatment options for these problems, which are often subtle and potentially serious disease entities, are markedly more limited in a deployed ship's medical department. In addition, STDs can result in

potential mortality in the setting of ectopic pregnancy for women deployed on ships.

STDs are also epidemic among sexually active adolescent and young adult women. *Chlamydia trachomatis* is the most common bacterial STD to afflict Americans with an estimated four million new cases occurring annually.<sup>1</sup> Because chlamydia testing and reporting is not universally done in the United States and because the performance of tests is highly variable, it is difficult to ascertain a true prevalence of the infection in the United States. However, the best estimates place the rate at approximately 300/100,000 cases annually with a female to male ratio of 6:1. Part of this gender discrepancy is due to the fact that males are not screened for chlamydia like women are, and often they go undetected with asymptomatic infections. A majority of chlamydial infections in women are also asymptomatic and are undiagnosed unless detected through a screening test. From a number of individual studies the prevalence of chlamydia among adolescent and young adult women screened during pelvic examinations ranges from 5-20%, with most studies reporting 10-15% infection.<sup>1</sup> Although limited exist data in military populations, the available information suggests similar rates. Ordnoff reported a prevalence rate of cervical chlamydial infections of approximately 10% in female Navy recruits.<sup>3</sup> Catterson described a prevalence of 8.2% chlamydia infections in 476 active duty Army females who presented for routine pap smears.<sup>4</sup> Both of these authors recommended the institution of screening for chlamydia in young, active-duty women.

In summary, UPs and STDs lead to significant morbidity, costs, and administrative demands in active-duty Navy women assigned to ships. Yet, a limited number of studies have been done to define

precise rates and contributing factors. Even more importantly, to our knowledge, no scientific efforts are under way to design and evaluate biologic and behavioral interventions to reduce the incidence of UPs and STDs in this population.

The current study will determine contraceptive use patterns and the prevalence and outcomes of STDs and UPs in active-duty Navy enlisted women. It will assess further the use of noninvasive screening tests for the detection of *C.trachomatis* and *Neisseria gonorrhoeae* by ligase chain reaction (LCR) and polymerase chain reaction (PCR) in first-void urines in a military health-care system. The results of this scientific effort will ultimately contribute to the development and evaluation of a biologic and behavioral intervention.

#### **Methods**

**Subjects:** This project is a dual-site, prospective, epidemiologic study being conducted on approximately 500 Navy enlisted women attached to 2 San Diego commands.

The research staff fully briefs the participants on the requirements of the study prior to giving informed consent to participate in this study. The participants then complete a self-report questionnaire that documents demographics; STD and UP risk behaviors; contraceptive use; and STD and pregnancy history. Each woman's medical history is obtained by reviewing her medical records. The medical record review is conducted to document contraceptive use, STD history, pregnancy history, HIV status, and Pap test status.

Confidentiality is strictly maintained. To ensure confidentiality a tear-off sheet with an identification code,

participant's name, and social security number is completed and separated from the questionnaire by the participant. The questionnaire and all other information is handled only by the research staff.

**Laboratory Procedures:** Fifteen ml of blood is drawn and centrifuged, and the serum is stored for syphilis and hepatitis B (Hep-B) core antibody screening. A urine sample is collected for pregnancy, chlamydia, and gonorrhea diagnostic testing. All serologies and the urine pregnancy test are performed at the Navy Environmental Preventive Medicine Unit 5 (NEMPU-5) laboratory using standard laboratory procedures. A portion of the unspun urine is frozen to -20°C and shipped to University of California, San Francisco (UCSF), for the chlamydia and gonorrhea testing. UCSF will test for chlamydia and gonorrhea antigen using molecular techniques (LCR/PCR).

**Surveillance and Follow-Up:** Participants are given their laboratory results as they are made available. Each participant who has a positive lab result is contacted by phone; negative results are given either by phone or by a letter in a sealed envelope. If the participant has a positive pregnancy test, she is counseled as to the need and the appropriate procedures for beginning prenatal care at the Naval Medical Center, San Diego. For other positive results the participants are assisted in seeking gynecologic treatment at Branch Medical Clinic, Naval Station, San Diego.

The women will be followed for approximately 3-6 months. During this period an investigator will review the medical and sick-bay records monthly for gynecological and obstetric events. At the end of the 3-6 month period the women will again provide a urine specimen, have blood drawn and fill out a questionnaire.



## **Results**

**Selection of Study Population:** The first step was to ascertain the number of women assigned to commands based in San Diego, California, and to investigate the information available related to rates of STDs and UPs. Final selection of the study populations was made after briefings by the research staff with the commanding officers (COs) of these commands to ensure a receptive environment for a collaborative, intensive study of STDs and UPs. The COs were made aware of the requirement for confidentiality with all questionnaires and biological data collected. The two San Diego commands, one shore-based and one ship-based, were selected due to their large complements of enlisted women. The ship selected is a submarine tender with approximately 30% female personnel (n = 450). The shore based facility is a ship's maintenance command and also has a large complement of women (n = 150). This shore-based command has the same Navy enlisted rates that are on the selected submarine tender.

**Retrospective Review of Submarine Tender Pregnancy Data:** We completed a retrospective review of the submarine tender pregnancy rates for 1994. The ship's medical department staff interviewed all women identified as pregnant, and they recorded information regarding marital status and whether the pregnancy was planned. Approximately 516 women were assigned to the submarine tender during 1994. The 1994 pregnancy rate was 14% (n = 71); 70% (n = 50) were UPs. Of the UPs: 64% (n = 32) were single, and 36% (n = 18) were married. Of the planned pregnancies (n = 21), 86% (n = 18) were married, and 14% (n = 3) were single.

**Enrollment Procedures:** We developed, piloted, and modified the survey instrument. An OPNAV Report Control Symbol (RCS), 6200-7, was

obtained from the Bureau Of Naval Personnel. Laboratory procedures were finalized for the urine and blood specimens.

Once the urine specimens are obtained they are aliquoted, frozen, and sent to UCSF for analysis. The blood is spun down for syphilis and Hep-B tests according to standard laboratory procedures.

**Enrollment Status:** We completed enrollment of the shore-based command cohort. Approximately 140 women were briefed on the study; a total of 132 (94.2%) subjects gave written consent to participate in the study. All (n = 132) completed the questionnaire; 104 (78.8%) provided blood and urine; 24 (18.2%) provided urine only; and 4 (3%) did not provide any blood or urine specimens. Enrollment of the submarine tender cohort will be completed in late August.

**Preliminary Analysis:** The demographic characteristics of the shore-based cohort reveal that the majority are married (60.6%), Caucasian (65%), more senior in grade (82% E-4 or greater), and nearly half have at least some college education (Table 1). The sexual and STD history reveal the mean age of first intercourse as approximately 17 years, with a mean of 11 lifetime partners. The majority are monogamous (71%), with approximately 10% admitting to multiple partners over the prior 6 months. Condoms are used consistently by only a small proportion (8.3%), and inconsistently used by approximately 27% of the group. A prior STD was reported by 53 (40.2%), with the most common being chlamydia (25%), followed by venereal warts (14.4%) and herpes (9.1%) (Table 2). Approximately 30% of the women are using no method of birth control; the most common method used is birth control pills (24%), followed by condoms (12%), and either a tubal ligation or vasectomy (9%). Depo-Provera and Norplant are used by only a small number of women (7%) (Table 3). Three quarters of the cohort had a

prior pregnancy, and 17 (13%) reported currently being pregnant. There was a mean of 2 prior pregnancies, with a mean of 1.2 UPs (Table 4).

Urine pregnancy (HCG) and chlamydia (LCR) tests were performed on 128 urine samples, with 18 positive HCG (13.9%) and 9 positive chlamydia (6.8%). RPR tests were performed on 104, blood samples and all were negative.

### **Conclusions**

No comprehensive study had been done of contraceptive use, behavioral correlates, and biopsychosocial factors that result in STDs and UPs in Navy women. In 1989 a Navy wide survey concerning pregnancy and single parenthood was conducted with enlisted active-duty women.<sup>5</sup> It was found that the majority of these pregnancies were unplanned (70%), among single women during their first enlistment, and that the fathers were most likely to be active duty military (50%). The latest findings of a 1992 survey reported a pregnancy rate of 7.5% and 8.6% in active-duty women, while assigned to ship and shore duty, respectively.<sup>6</sup> Of these pregnancy outcomes, almost 70% were unplanned and only 55% of the women reported using some form of birth control. These data are similar to those found among civilian populations in which the United States has been shown to have the highest UP rate among unmarried young adult females of any western nation. This high UP rate may be explained in part by the lack of consistent and effective use of contraception. More than 50% of women attending abortion counselling were found to be using contraception inconsistently or incorrectly, resulting in an unintended pregnancy.

The preliminary analysis of this study to date is in accordance

with previously published data. The sexual debut of these subjects matches that is seen in the general population: 89% of the subjects reported having their first sexual intercourse before the age of 19. The historical information, in Table 2, (i.e. multiple lifetime partners, early sexual debut, and unprotected sex) reflects a high-risk population. However, the more current information (regarding the last 6 months) seems to suggest that the majority of the subjects are now low risk. Only 4.5% report to have currently more than one sexual partner, and 86.6% report having had one or fewer different partners (including spouse) in the last 6 months. This shift may be due to the majority of the subjects being married, over 22-years-old, and now at a rank where one starts to think about making the Navy a career (Table 1). Review of the demographics of the subtender female population reveals them to be younger, in lower enlisted rates, and predominately single.

The choices of birth control are the same as those seen in the general population, with the most common method being the Pill (see Table 4). The majority (70%) of the subjects use some method of birth control. After accounting for those who are pregnant a significant percentage (17%) still report not using any form of birth control.

The subjects' self-report pregnancy history is seen in Table 5. All of the current self-reported pregnancies were confirmed by HCG, except for 3 women, 2 of whom did not give a urine specimen. Two women who reported that they did not know whether they were pregnant and 2 women who reported that they were not pregnant had positive HCG for a total of 21 current pregnancies. This pregnancy rate (16%) is reflective of the fact that this command is one in which women are sent temporary assigned duty (TAD) due to pregnancy; plus, as a shore

command, many women may plan a pregnancy while on this tour (75% intended pregnancy rate).

Part of the cost-benefit analysis for the screening and treatment of chlamydial infections requires consideration for the tremendous reproductive morbidity of chlamydial infections in women. Ten to twenty percent or more of endocervical infections progress to PID. Risk factors for PID parallel those for STD acquisition for women and include younger age, multiple sexual partners, nonbarrier contraception, IUD use, and most recently, vaginal douching. Smoking has also been associated with PID but may be more of a marker for other risk behaviors rather than a cause itself. Again, the single greatest risk factor for PID is unprotected sexual intercourse. Twenty-five percent of women who have had PID, mostly due to chlamydia, develop infertility due to fallopian tube damage. This tubal damage also can result in ectopic pregnancy, which has become epidemic, in large part mirroring the chlamydia epidemic.<sup>7</sup> Women have a seven to ten fold increased risk for ectopic pregnancy after a single episode of PID.<sup>8</sup> In this study approximately 6% of the shore-based cohort, an older, lower risk population, had asymptomatic chlamydia infection. We suspect this rate will be markedly higher in the subtender population of women, a predominately younger and unmarried group. Establishing these prevalence rates of infection will assist in appropriate cost-benefit analyses to guide screening policies.

Progress of this project was delayed due to a number of issues. First, funding was not received until mid-November, which delayed the hiring of support personnel. Second, one of our initially identified ships was unexpectedly decommissioned and another site needed to be

identified. Once this was done the enrollment process was quickly initiated and proceeded smoothly. The submarine tender enrollment is due to be completed late August, deployment schedules permitting.

Importantly, this work will form the basis of an extramural program with our UCSF collaborators scheduled to commence in September 1995. This follow-on study proposes to design, implement, and evaluate an intervention for the prevention of STDs and UPs in Navy enlisted females.

## References

1. Centers for Disease Control: Recommendations for the prevention and management of *Chlamydia trachomatis* infections. MMWR 42(12):2, 1993.
2. Irwin CE. The Health of America's Youth. Washington, DC: National Center for Education and Maternal and Child Health, 1990:31.
3. Orndorff GR. Screening for *Chlamydia trachomatis* by the direct fluorescent antibody test in female Navy recruits. Mil Med, 1991 Dec; 156(12):675-7.
4. Catterson ML, Zadoo V. Prevalence of asymptomatic chlamydial cervical infection in active duty Army females. Mil Med, 1993 Sep; 158(9):618-9.5.
5. Thomas PJ, Edwards JE. Incidence of Pregnancy and Single Parenthood Among Enlisted Personnel in the Navy. San Diego (CA): Navy Personnel Research and Development Center; 1989. Report No.:90-1.
6. Thomas PJ, Thomas MD, Robertson P. Absences of Navy Enlisted Personnel: A Search for Gender Difference. San Diego (CA): Navy Personnel Research and Development Center, 1993. Report No.:93-3.
7. Brunhan RC, Binns B, McDowell J, Paraskevas M. *Chlamydia trachomatis* infection in women with ectopic pregnancy. Obstet Gynecol, 1986 May; 67(5):772-6.
8. Bauwens JE, Clark AM, Stamm WE. Diagnosis of *Chlamydia trachomatis* endocervical infections by a commercial polymerase chain reaction assay. J Clin Microbiol, 1993 Nov; 31(11):3023-7.

**TABLE 1. Demographic Characteristics of Cohort of Navy Enlisted Women, June 1995**

	Participants (n = 132)
Age (mean, years)	26.6
Time in military (mean, years)	6.0
Paygrade	
E-1 to E-3	22 (16.7%)
E-4 to E-6	103 (78.0%)
E-7 to E-9	06 (4.5%)
Race	
White	86 (65.2%)
African-American	22 (16.7%)
Hispanic	12 (9.1%)
Asian/Pacific Islander	06 (4.5%)
American Indian	03 (2.3%)
Other	03 (2.3%)
Marital status	
Married	80 (60.6%)
Single	30 (22.7%)
Separated/Divorced	22 (16.7%)
Education level	
College	64 (49.2%)
High School	56 (43.1%)
Vocational	09 (6.9%)
Graduate	01 (0.8%)



**TABLE 2. STD and Sexual History by Self-Report in a Cohort of Navy Enlisted Women, June 1995**

Mean age of 1st intercourse (years)	16.7
Mean number of lifetime partners	11.4
Number of partners in last 6 months	
None	23 (17.4%)
One person	94 (71.2%)
2-3 people	11 (8.3%)
4-5 people	02 (1.5%)
6 or more	01 (0.8%)
Have more than one current sex partner	Yes 06 (4.5%)
New partner in the last 6 months	Yes 25 (18.9%)
Condom use in the last 6 months	
Never used	73 (55.3%)
Less than 50% of time	23 (17.4%)
More than 50% of time	12 (9.1%)
Always	11 (8.3%)
No sex	12 (9.1%)
Any Prior STD	Yes 53 (40.2%)
	<u>YES</u>
Ever Had	
Syphilis	00 (0%)
Gonorrhea	05 (3.8%)
Venereal warts	19 (14.4%)
Chlamydia	33 (25.0%)
Herpes	12 (9.1%)
PID	10 (7.6%)
Other STD	09 (6.8%)

Total denominators for each variable varied slightly due to questionnaire nonresponse.

**TABLE 3. Method of Birth Control by Self-Report in a Cohort of Navy Enlisted Women, JUNE 1995**

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No method	40 (30.3%)
Birth control pills	31 (23.5%)
Condom	16 (12.2%)
Tubal/Hysterectomy	09 (6.8%)
Depo-Provera	07 (5.3%)
Withdrawal	07 (5.3%)
Abstinence	04 (3.0%)
Norplant	02 (1.5%)
Diaphragm/Spermicide	01 (0.8%)
Diaphragm/Condom	01 (0.8%)
Vasectomy	02 (1.5%)

---

Total denominators for each variable varied slightly due to questionnaire nonresponse.

**TABLE 4. Pregnancy History by Self-Report in a Cohort of Navy Enlisted Women, June 1995**

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Previous history of pregnancy	Yes	99 (75.0%)
	No	33 (25.0%)
Number of pregnancies	Mean =	2.0; (Range 1-7)
Number unintended	Mean =	1.2; (Range 0-7)
Currently pregnant	Yes	17 (12.9%)
	No	107 (81.1%)
Pregnant in last 6 months	Yes	18 (13.6%)
	No	112 (84.8%)
Of those who were pregnant in last 6 months:		
Using birth control at time became pregnant	Yes	05 (21.7%)
	No	18 (78.3%)
Intended to become pregnant	Yes	17 (75.0%)
	No	06 (25.0%)
TAD to shore command because of pregnancy	Yes	07 (30.4%)
	No	16 (69.6%)

---

Total denominators for each variable varied slightly due to questionnaire nonresponse.

# REPRODUCTIVE HEALTH ASSESSMENT SURVEY

NAVAL HEALTH RESEARCH CENTER, SAN DIEGO

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## Information to participants

You are being asked to voluntarily complete this survey, giving candid responses and opinions about sexually transmitted diseases and pregnancy-related issues, and to become part of a study that will involve one additional questionnaire, plus blood and urine specimens. Your answers are for research use only and will be kept strictly confidential. Data will be reported so that no individual participant can be identified, and the information you provide will not become part of anyone's official records. If you have any questions about this survey please contact Dr. Stephanie Brodine, Naval Health Research Center, San Diego, CA 902186-5122/DSN: 553-7809; Commercial (619) 553-7809.

## Privacy Act Statement

1. **Authority** to request this information is granted under Title 5 USC 301, and Executive Order 9396. License to administer this survey is granted under OPNAV Control Symbol: 6200-7 which expires 28 Feb 1996. 2. **Purpose:** Medical research information will be collected to enhance basic medical knowledge concerning women's health and health promotion. 3. **Routine use:** The information provided in this questionnaire will be analyzed by the Naval Health Research Center to determine women's health trends. The data files will be maintained by the Naval Health Research Center. 4. **Confidentiality:** I understand that all information derived from the study will be retained at the Naval Health Research Center, San Diego, and that my confidentiality will be maintained. All responses will be held in confidence by the Naval Health Research Center. Any information that is provided will be considered only when statistically summarized with the responses of others, and will not be attributable to any single individual. My name and social security number are being requested in case the researchers need to contact me regarding my laboratory results. 5. **Voluntary disclosure:** I understand that my provision of information is voluntary, and that I am free to discontinue filling out the questionnaire and withdraw from the study at any time without prejudice or loss of medical treatment or privileges to which I would otherwise be entitled.

---

A. NAME (please print):

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Last	First	Middle Initial
------	-------	----------------

B. Social security number: \_\_\_\_\_ -- \_\_\_\_\_ -- \_\_\_\_\_

C. Date of Birth: Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: 19 \_\_\_\_\_

D. PRD: Month: \_\_\_\_\_ Year: 19 \_\_\_\_\_

After completing please tear off and give to a research staff member.

THANK YOU!

## REPRODUCTIVE HEALTH ASSESSMENT SURVEY

NOTE: ALL INFORMATION IS CONFIDENTIAL

1. Length of time in the military: \_\_\_\_\_ years
2. Current paygrade: (*Check one box*)  

[1]  
E-1 to E-3

[2]  
E-4 to E-6

[3]  
E-7 to E-9
3. What is your rating (SN, BT, FN, HM, SK, etc)? \_\_\_\_\_
4. To what ship or command are you currently assigned? \_\_\_\_\_
5. Is your current assignment TAD or PCS?  

[0]  
TAD

[1]  
PCS
6. What was your **prior** ship or command assignment? \_\_\_\_\_
7. How long have you been attached to your **current** ship or command?  

[1]

Less than 6 months

[2]

7 - 12 months

[3]

13 - 24 months

[4]

More than 24 months
8. What is your age? \_\_\_\_\_ years
9. What is your race or ethnic background?  

[1]

American Indian

[2]

Asian/Pacific Islander/Filipino

[3]

African-American/Black

[4]

Hispanic/Latino

[5]

White/Caucasian

[6]

Other (*Please specify*) \_\_\_\_\_
10. What is your current marital status?  

[1]

Single/Never married

[2]

Married/Living as married

[3]

Separated/Divorced/Widowed

11. What is the highest level of education you have completed? (*Circle one*)

<u>School</u>	<u>Number of Years Attended</u>			
High School Diploma/GED	1	2	3	4
Vocational/Technical School	1	2	3	4
College/University	1	2	3	4
Graduate School	1	2	3	4

The following questions deal with your general reproductive health.

12. Where do you seek gynecologic care (birth control, pap smears, etc.)? (*Check all that apply*)

[1] Branch Medical Clinic (*Please check one below*)

[A] NTC      [B] 32nd ST  
[C] Subbase      [D] Other \_\_\_\_\_

[2] Naval Hospital

[3] Ship Medical Department

[4] Navcare Clinic (*Please check one below*)

[A] Southbay      [B] Clairemont Mesa

[5] Other (*Please specify*) \_\_\_\_\_

13. What do you usually use during your periods? (*Check one*)

[1]                      [2]                      [3]  
Tampons              Pads                      Both

14. Have you ever douched?

[0]                      [1]  
No                      Yes

15. When was the last time that you douched?

\_\_\_ Month    \_\_\_ Day    \_\_\_ Year                      \_\_\_ Don't douche

16. How often do you douche?

[0]              [1]              [2]              [3]              [4]              [5]  
Never              Only              Once              Once              Every              Every  
                         tried once              per month              per week              2-3 days              day

17. If you douche regularly, when do you usually douche?

[1]                      [2]                      [3]                      [4]  
I never do              After period is finished              After sex              Other \_\_\_\_\_

18. Have you ever had a pap smear?

[0]  
No

[1]  
Yes

[2]  
Don't Know

If yes, when was your last pap smear: \_\_\_\_ Month \_\_\_\_ Year

19. Has a doctor or nurse ever told you that your pap smear was abnormal?

[0]  
No

[1]  
Yes

[2]  
Don't Know

20. If yes, have you ever received treatment for an abnormal pap (for example freezing, laser)?

[0]  
No

[1]  
Yes

[2]  
Don't Know

21. Have you ever had a colposcopy (the vagina and cervix are examined using a special magnifying lens) for any reason?

[0]  
No

[1]  
Yes

[2]  
Don't Know

22. In the past 30 days have you had any of the following symptoms: (If yes, did you seek treatment at a clinic/sick call?)

TREATMENT

		YES	NO	YES	NO
A.	Itching in your vaginal (private parts) area for more than a day.				
B.	Feeling you have to pee much more often than usual for more than a day.				
C.	Pain deep inside your vagina with sex.				
D.	Bad pain in lower stomach or abdomen for more than a day				
E.	Bleeding in between periods or too much bleeding at a regular period (more than usual)				
F.	Small amount of blood from the vagina after sex				
G.	Discharge: An unusual discharge from your vagina which is more than usual, yellow-green color or smelly				

23. The following few questions are about antibiotics:

A. Have you taken any antibiotics for any reason in the last 14 days? (*Check one*)

[0]

No

[1]

Yes

**If yes:**

B. Give the date started:                      \_\_\_ \_\_\_ Month    \_\_\_ \_\_\_ Day    \_\_\_ \_\_\_ Year

C. Give the name of the antibiotic: \_\_\_\_\_

24. Have you **ever** been told by a doctor or nurse that you had a sexually transmitted disease?

[0]

No

[1]

Yes

25. Have you **ever** had any of the following? (*Please **do not skip** these questions; circle only one response for each; list the number of times you were diagnosed with each condition, if applicable.*)

				<b><u># TIMES</u></b>
A.	Syphilis	YES	NO	DON'T KNOW
B.	Gonorrhea (GC)	YES	NO	DON'T KNOW
C.	Venereal warts (warts on the vagina)	YES	NO	DON'T KNOW
D.	Chlamydia	YES	NO	DON'T KNOW
E.	Herpes in or around the vagina or rectum	YES	NO	DON'T KNOW
F.	Pelvic inflammatory disease (sometimes called PID or infection of the tubes or ovaries)	YES	NO	DON'T KNOW
G.	Any other sexually transmitted disease you got from having sex, such as "trich"?	YES	NO	DON'T KNOW
H.	Vaginitis (infection in the vagina such as yeast)	YES	NO	DON'T KNOW
I.	Cystitis/Bladder Infections	YES	NO	DON'T KNOW



The following questions are about sexual relationships and reproduction. We realize this information is very personal, but we really appreciate your honesty in answering these questions and we assure you that all information will remain confidential.

NOTE: "Sexual intercourse" includes vaginal, oral, or anal sex.

26. Have you ever had sexual intercourse? (Sex, making love, going all the way, screwing)

[0]  
No

[1]  
Yes

A. If yes, at what age was your first sexual intercourse? \_\_\_\_\_

B. If no, please skip to question 40.

27. Have you ever had sexual intercourse with someone who used needles to "shoot" or inject drugs?

[0]  
No

[1]  
Yes

[2]  
Don't Know

28. Have you ever had sexual intercourse with someone who might have been infected with the AIDS virus?

[0]  
No

[1]  
Yes

[2]  
Don't Know

29. About how many times have you ever had sexual intercourse?

I have never had sexual intercourse .....	0
1 to 5 times .....	1
6 to 15 times .....	2
16 to 30 times .....	3
30 or more times .....	4

30. About how many different people have you ever had sexual intercourse with? \_\_\_\_\_

31. During the last 6 months, about how many times did you have sexual intercourse?

I did not have sexual intercourse in the last 6 months .....	0
1 or 2 times .....	1
3 to 5 times .....	2
6 to 9 times .....	3
10 or more times .....	4

32. During the last 6 months, about how many times did you or your partner use a condom (rubber) when having sexual intercourse?

I did not have sexual intercourse  
in the last 6 months ..... 0  
We don't ever use condoms ..... 1  
Less than half the time I had sex ..... 2  
More than half the time I had sex ..... 3  
Every time I had sex ..... 4

33. In the last 6 months, have you had sex with a new partner (someone who you never had sex with before)?

[0] [1]  
No Yes

34. During the last 6 months, how many different people (including spouse) did you have sexual intercourse with?

[0] [1] [2] [3] [4]  
No one One person 2-3 people 4-5 people 6 or more people

35. Do you have only one sex partner?

[0] [1]  
No Yes

If yes:

- A. How long have you been with this partner?

\_\_\_\_\_ Weeks \_\_\_\_\_ Months \_\_\_\_\_ Years

- B. Has your partner had sex with someone other than you in the last 6 months?

[0] [1] [2] [3]  
No, Not sure Yes, Don't Know  
definitely not but possible definitely

36. Do you have more than one sex partner?

[0] [1]  
No Yes

If yes:

- A. How many sex partners do you have? \_\_\_\_\_

- B. Have any of your partners had sex with someone other than you in the last 6 months?

[0] [1] [2] [3]  
No, Not sure Yes, Don't Know  
definitely not but possible definitely

37. When having sexual intercourse, have you ever used any of the following:  
(Check all that apply)

- [1] Birth control pills
- [2] Depo-Provera (shot every 3 months)
- [3] Norplant (Implants)
- [4] IUD
- [5] Diaphragm
- [6] Spermicide (Foam, Jelly)
- [7] Partner withdraws or "Pulls out"
- [8] Partner wears condoms or rubbers
- [9] Sponge
- [10] No method (I do not use any type of birth control)
- [11] Any other (Please specify) \_\_\_\_\_

38. During the last 6 months, when having sexual intercourse, did you use:  
(Circle the number that best describes your answer for each question)

	<b>[1]</b> Never	<b>[2]</b> Rarely	<b>[3]</b> Sometimes	<b>[4]</b> Usually	<b>[5]</b> Always		
A.	Birth control pills		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
B.	Depo-Provera (shot every 3 mos.)		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
C.	Norplant (Implants)		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
D.	IUD		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
E.	Diaphragm		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
F.	Spermicide (Foam, Jelly)		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
G.	Partner withdraws or "Pulls out"		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
H.	Partner uses condoms or rubbers		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I.	Sponge		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
J.	No method (I do not use any)		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
K.	Other (Please specify) _____						

39. What method(s) did you use the last time you had sexual intercourse?

\_\_\_\_\_

40. What is your current method of birth control? \_\_\_\_\_

41. Are you pregnant now?

[0]  
No

[1]  
Yes

[2]  
Don't Know

42. Have you become pregnant in the last six months?

[0]  
No

[1]  
Yes

43. If you answered yes to either question 41 or 42 above, please answer the following:

A. Were you TAD to a shore command because of this pregnancy?

[0]  
No

[1]  
Yes

B. Did you intend to become pregnant?

[0]  
No

[1]  
Yes

C. Were you using birth control at the time you became pregnant?

[0]  
No

[1]  
Yes

D. What birth control method(s) were you using at the time you became pregnant?

---

44. Have you ever been pregnant?

[0]  
No

[1]  
Yes

If yes:

A. How many times have you been pregnant? ..... \_\_\_\_\_

B. How many of these pregnancies were unintended or unplanned? ... \_\_\_\_\_

C. How many were ectopic (baby growing outside the womb)? ..... \_\_\_\_\_

D. How many miscarriages/abortions/stillborns have you had? ..... \_\_\_\_\_

E. How many children have you given birth to? ..... \_\_\_\_\_

F. For any of these pregnancies were you using birth control?

[0]  
No

[1]  
Yes

If yes, What method(s) were you using at the time? \_\_\_\_\_

45. Do you want to become pregnant in the next 6 months?

[0]  
No

[1]  
Yes

[2]  
It doesn't really matter

The following questions are about alcohol use. Remember there are no "right" or "wrong" answers. Please check one response for each question.

46. **In the last 6 months**, how many times have you had sexual intercourse while under the influence of alcohol (feeling buzzed, getting wasted, being drunk)?

I did not have sexual intercourse  
while under the influence of alcohol . . . . . 0  
1 to 2 times . . . . . 1  
3 to 5 times . . . . . 2  
6 to 9 times . . . . . 3  
10 or more times . . . . . 4

47. During the **past 30 days**, did you **ever** drink alcohol until you passed out or threw up?

[0] [1]  
No Yes

48. During the **past 30 days**, on how many days did you drink **BEER**? (*Check only one*)

[1] 28 - 30 days (about every day)  
[2] 20 - 27 days (5-6 days a week, average)  
[3] 11 - 19 days (3-4 days a week average)  
[4] 4 - 10 days (1-2 days a week, average)  
[5] 2 - 3 days in the past 30  
[6] Once in the past 30 days  
[7] Didn't drink any beer in the last 30 days

49. Think about the days when you drank **BEER** in the **past 30 days**. How much beer did you usually drink on a **typical day** when you drank beer? (*Check only one*)

[1] 12 or more beers  
[2] 9 - 11 beers  
[3] 7 - 8 beers  
[4] 4 - 6 beers  
[5] 1 - 3 beers  
[6] Didn't drink any beer in the past 30 days

50. During the **past 30 days**, on how many days did you drink **WINE**? (*Check only one*)

[1] 28 - 29 days (about every day)  
[2] 20 - 27 days (5-6 days a week, average)  
[3] 11 - 19 days (3-4 days a week, average)  
[4] 4 - 10 days (1-2 days a week, average)  
[5] 2 - 3 days in the past 30 days  
[6] Once in the past 30 days  
[7] Didn't drink any wine in the past 30 days

51. During the **past 30 days**, did you usually drink **REGULAR WINE** or a **FORTIFIED WINE**? (*Check only one*)

[1] Regular wine (also call "table" or "dinner" wine) and/or Champagne  
[2] Fortified wine (such as sherry, port, vermouth, brandy, Dubonnet)  
[3] Didn't drink any wine in the past 30 days.

52. Think about the days when you drank **WINE** in the past 30 days. How much wine did you usually drink on a typical day when you drank wine? The standard wine glass holds about 4 ounces of wine. The standard wine bottle holds about 24 ounces (750 ml) or approximately six glasses of wine. (*Check only one*)
- [1] 12 or more wine glasses
  - [2] 9 - 11 wine glasses
  - [3] 7 - 8 wine glasses
  - [4] 4 - 6 wine glasses
  - [5] 1 - 3 wine glasses
  - [6] Didn't drink any wine in the past 30 days
53. During the past 30 days, on how many days did you drink **HARD LIQUOR**? (*Check only one*)
- [1] 28 - 30 days (about every day)
  - [2] 20 - 27 days (5-6 days a week, average)
  - [3] 11 - 19 days (3-4 days a week, average)
  - [4] 4 - 10 days (1-2 days a week, average)
  - [5] 2 - 3 days in the past 30 days
  - [6] Once in the past 30 days
  - [7] Didn't drink any hard liquor in the past 30 days
54. Think about the days when you drank **HARD LIQUOR** in the past 30 days. How much hard liquor (including liqueur) did you usually drink on a typical day, when you drank hard liquor? (*Check only one*)
- [1] 12 or more drinks
  - [2] 9 - 11 drinks
  - [3] 7 - 8 drinks
  - [4] 4 - 6 drinks
  - [5] 1 - 3 drinks
  - [6] Didn't drink any hard liquor in the past 30 days.
55. During the past 30 days, about how many ounces of **HARD LIQUOR** did you usually have in your average drink? The average bar drink, mixed or straight, contains a "jigger" of 1 1/2 ounces of hard liquor. (*Check only one*)
- [1] 5 or more
  - [2] 4 ounces
  - [3] 3 ounces
  - [4] 2 ounces
  - [5] 1 ounces
  - [6] Didn't drink any hard liquor in the past 30 days
56. What is the name of the drink that you usually have which contains hard liquor?
- \_\_\_\_\_
57. How many different liquors (shots) are in the drink you usually have? \_\_\_\_\_

**THANK YOU FOR YOUR COOPERATION!**